CHAPTER 6. REFERENCES

CHAPTER 6. REFERENCES

- AECOM. 2011. Acoustic Investigation, Virginia Development Plan Amendment. Available at: http://dpti.sa.gov.au/__data/assets/pdf_file/0006/99150/Acoustic_Investigation__Virginia_Development_Plan_Amendment,_May_2011_AECOM.pdf. Accessed July 19, 2013.
- Albright, L. B., D. D. Gillette, and A. L. Titus. 2002. New Records of Vertebrates from the Late Cretaceous Tropic Shale of Southern Utah. Cedar City, Utah: Abstracts, 2002 Rocky Mountain Section of the Geological Society of America Annual Meeting.
- ———. 2007a. Plesiosaurs from Upper Cretaceous (Cenomanian-Turonian) Tropic Shale of southern Utah, part 1: Pliosauridae. *Journal of Vertebrate Paleontology* 27(1):31-40.
- ——. 2007b. Plesiosaurs from Upper Cretaceous (Cenomanian-Turonian) Tropic Shale of southern Utah, part 2: Polycotylidae. *Journal of Vertebrate Paleontology* 27(1):41-58.
- Aoude, A. 2008. Personal communication between A. Aoude and G. Weekley, SWCA Environmental Consultants, June 2008.
- Applied Geotechnical Engineering Consultants. 2007. Preliminary Radiation Assessment. Prepared for Alton Coal Development, LLC. St. George, Utah: Applied Geotechnical Engineering Consultants, Inc.
- Arabasz, W. J., J. Ake, M. K. McCarter, and A. McGarr. 2002. *Mining-Induced Seismicity near Joes Valley Dam: Summary of Ground-Motion Studies and Assessment of Probable Maximum Magnitude*. Prepared for State of Utah School and Institutional Trust Lands Administration, Salt Lake City.
- Arabasz, W. J., R. B. Smith, J. C. Pechmann, K. L. Pankow, and R. Burlacu. 2006. Annual Technical Report: Integrated Regional and Urban Seismic Monitoring—Wasatch Front Area, Utah, and Adjacent Intermountain Seismic Belt. Salt Lake City: University of Utah, Department of Geology and Geophysics.

- Association of National Park Authorities. 2013. The impacts of tourism. Available at: http://www.nationalparks.gov.uk/learningabout/ourchallenges/tourism/impactsoftourism.htm. Accessed July 2, 2013.
- Bainbridge, D. A. 1990. The restoration of agricultural lands and drylands. In *Environmental Restoration:* Science and Strategies for Restoring the Earth, edited by J. J. Berger. Washington, D.C.: Island Press.
- Bainbridge, D. A., and J. E. Lovich. 1999. Anthropogenic degradation of the southern California desert ecosystem and prospects for natural recovery and restoration. *Environmental Management* 24 (3):309-326.
- Bainbridge, D. A., R. McAller, M. Fidelibus, R. Franson, A. C. Williams, and L. Lippit. 1995. *A Beginner's Guide to Desert Restoration*. Edited by D. S. C. National Park Service.
- Barrick Gold Corporation. 2009. *Cowal Gold Mine E42 Modification. Modified Request*. Project No. HAL-09-34. Document No. 00309646.doc. October 2009. Available at: http://barrick.com/files/cowal/Cowal-E42-Modification-Modified-Request.pdf. Accessed May 15, 2013.
- Baruch-Mordo, S., J. S. Evans, J. P. Severson, D. E. Naugle, J. D. Maestas, J. M. Kiesecker, M. J. Falkowski, C. A. Hagen, and K. P. Reese. 2013. Saving sage-grouse from the trees: A proactive solution to reducing a key threat to a candidate species. *Biological Conservation* 167:233–241.
- Beck, J. L., D. L. Mitchell, and B. D. Maxfield. 2003. Changes in the distribution and status of sage-grouse in Utah. *Western North American Naturalist* 63:203-214.
- Beier, P. 2006. Effects of Artificial Night Lighting on Terrestrial Mammals. In *Ecological Consequences* of Artificial Night Lighting, edited by C. Rich and T. Longcore. Washington, D.C.: Island Press.
- Bell, F. G., and L. J. Donnelly. 2006. *Mining and Its Impact on the Environment*. New York: Taylor and Francis Group.
- Belnap, J., and D. A. Gillette. 1997. Disturbance of Biological Soil Crusts: Impacts on Potential Wind Erodibility of Sandy Deseret Soils in Southeastern Utah. *Land Degradation & Development* 8:355–362. Available at: http://sbsc.wr.usgs.gov/products/pdfs/Belnap_and_Gillette_1997_Disturbance_of_biological.pdf. Accessed June 20, 2013.
- Belnap, J., J. H. Kaltenecker, R. Rosentreter, J. Williams, S. Leonard, and D. Eldridge. 2001. Biological Soil Crusts: Ecology and Management. In *Technical Reference 1730-2*. Denver, Colorado: U.S. Department of the Interior, Bureau of Land Management, U.S. Geological Survey.
- Bergquist, E., P. P. Evangelista, T. J. Stohlgren, and N. Alley. 2007. Invasive species and coal bed methane development in the Powder River Basin, Wyoming. *Environmental Monitoring and Assessment* 128(1–3):381–394.
- Best Friends Animal Society. 2011. Who we are. Our story. Available at: http://bestfriends.org/Who-We-Are/Our-Story/. Accessed June 21, 2013.





- ———. 2013b. *Instruction Memorandum No. 2013-131, Change 1. Guidance on Estimating Nonmarket Environmental Values.* September 12, 2013. Available at: http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2013/IM_2013-131__Ch1.html. Accessed October 30, 2013.
- ———. 2013c. *Utah Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement*. U.S. Department of the Interior, Bureau of Land Management. Available at: http://www.blm.gov/ut/st/en/prog/planning/SG_RMP_rev.html. Accessed January 1, 2014.
- BLM and DOE. 2008. Programmatic Environmental Impact Statement, Designation of Energy Corridors on Federal Land in the 11 Western States. DOE/EIS-0386. Available at: http://corridoreis.anl.gov/documents/fpeis/vol1/WWEC_FPEIS_FrontI.pdf. Accessed January 15, 2014.
- Blue Ribbon Advisory Council. 2007. Climate Change and Utah: The Scientific Consensus. Available at: http://www.inscc.utah.edu/~steenburgh/papers/utah_climate_report_2007.pdf. Accessed June 3, 2013.
- Bortle, J. E. 2001. The Bortle Dark-Sky Scale. Sky and Telescope 101:(2):126–129.
- Bosworth, W. R. 2003. *Vertebrate information compiled by the Utah Natural Heritage Program: A progress report*. Prepared for Utah Reclamation Mitigation and Conservation Commission and the U.S. Department of the Interior. Salt Lake City: Utah Department of Natural Resources. Available at: http://dwrcdc.nr.utah.gov/ucdc/ViewReports/vertrpt.htm. Accessed January 23, 2014.
- Bowers, W. E., A. A. Aigen, and E. R. Landis. 1976. *Coal Resources of the Alton, Utah, EMRIA Site.*Open File Report 76-386. Washington, D.C.: U.S. Department of the Interior, Geological Survey.
- Boyle, M. A., and K. A. Kiel. 2001. A Survey of House Price Hedonic Studies of the Impact of Environmental Externalities. *Journal of Real Estate Literature* 9(2):117–144.
- Boynton, R. M., and K. F. Purl. 1989. Categorical color perception under low-pressure sodium lighting with small amounts of added incandescent illumination. *Lighting Research and Technology* 21:23–27.
- Briggs, P. 2004. Effect of barn conversion on bat roost sites in Hertfordshire, England. *Mammalia* 68(4):353–364.
- Buchanan, B. W. 2006. Observed and Potential Effects of Artificial Night Lighting on Anuran Amphibians. In *Ecological Consequences of Artificial Night Lighting*, edited by C. Rich and T. Longcore. Washington, D.C.: Island Press.
- Burton, P. 2008. Personal communication between P. Burton, Utah Division of Oil, Gas, and Mining, and B. Gaddis, SWCA, on September 30, 2008.
- CALTRANS. 2002. *Transportation Related Earthborne Vibrations (Caltrans Experiences)*. Technical Advisory, Vibration TAV-02-01-R9601. Sacramento: California Department of Transportation, Division of Environmental Analysis, Office of Noise, Air Quality, and Hazardous Waste Management.
- Carr, E. L. 1989. *Evaluation of Night Sky Model and Human Perception of Night Sky Glow.* No. SYSAPP-89/106. August 1989. San Rafael, California: Systems Applications, Inc.

- CCSP. 2008. Scientific Assessment of the Effects of Global Change on the United States Summary and Findings. Washington, D.C.: U.S. Climate Change Science Program.
- CEQ. 1997. Environmental Justice. Guidance under the National Environmental Policy Act. Washington, D.C.: Council on Environmental Quality.
- Chae, Y. S. 1978. Design of excavation blasts to prevent damage. *Civil Engineering-American Society of Civil Engineers* 48(4):77–79.
- Chow, V. T., D. R. Maidment, and L. W. Mays. 1988. Chapter 5: Surface Water, pp. 127–174. In *Applied Hydrology*. New York: McGraw-Hill, Inc.
- Christenson, Tom. 2008. Personal communication between Tom Christenson, BLM, and George Weekley, SWCA, on May 1, 2008.
- Church, L. 2010. Personal communication between L. Church and B. Gaddis, SWCA, on November 28, 2010.
- Colborn, T., F. S. vom Saal, and A. M. Soto. 1993. Developmental effects of endocrine-disrupting chemicals in wildlife and humans. *Environmental Health Perspectives* 101(5):378–384.
- Commons, M. L., R. K. Baydack, and C. E. Braun. 1999. Sage Grouse response to pinyon-juniper management. Compiled by S. B. Monson and R. Stevens. In *Ecology and Management of Pinyon-Juniper Communities within the Interior West*. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fort Collins, Colorado.
- Community Environmental Monitoring Program. 2011. Station Wind Rose Cedar City Utah. Available at: http://www.cemp.dri.edu/. Accessed February 11, 2014. On file at SWCA, Salt Lake City, Utah.
- Connelly, J. W., and L. A. Doughty. 1989. Sage Grouse Use of Wildlife Water Developments in Southeastern Idaho. In *Wildlife Water Developments: A Proceedings of the Wildlife Water Development Symposium*, edited by G. K. Tsukamoto and S. J. Stiver. Reno: Nevada Department of Fish and Game.
- Connelly, J. W., C. A. Hagen, and M. A. Schroeder. 2011. Characteristics and Dynamics of Greater Sage-grouse Populations. In *Greater Sage-Grouse: Ecology and Conservation of a Landscape Species and Its Habitats, Studies in Avian Biology No. 38*, edited by S. T. Knick and J. W. Connelly. Berkeley: University of California Press, and Norman, Oklahoma: Cooper Ornithological Society.
- Connelly, J. W., S. T. Knick, M. A. Schroeder, and S. J. Stiver. 2004. Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats. Unpublished report. June 2004. Cheyenne, Wyoming: Western Association of Fish and Wildlife Agencies.
- Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines for management of sage grouse populations and habitat. *Wildlife Society Bulletin* 28(4):967–985.
- Conover, M. R., W. C. Pitt, K. K. Kessler, T. J. DuBow, and W. A. Sanborn. 1995. Review of human injuries, illness and economic losses caused by wildlife in the U.S. *Wildlife Society Bulletin* 23:407–414.
- Cordova, R. M. 1981. Ground-Water Conditions in the Upper Virgin River and Kanab Creek Basins Area, Utah, with Emphasis on the Navajo Sandstone. Reston, Virginia: U.S. Geological Survey.

- Crawford, J. A., R. A. Olson, N. E. West, J. C. Mosley, M. A. Schroeder, T. D. Whitson, R. F. Miller, M. A. Gregg, and C. S. Boyd. 2004. Ecology and Management of Sage-Grouse and Sage-Grouse Habitat. *Journal of Range Management* 57(1):2–19.
- Crocker-Bedford, D. C., and J. J. Spillett. 1981. *Habitat relationships of the Utah prairie dog*. Publication No. 1981-0-677-202/4. U.S. Department of Agriculture, Forest Service, Intermountain Region, Ogden, Utah.
- Crowther, S. 2013. Personal communication between S. Crowther, UDWR, and J. Eyre, SWCA, on September 12, 2013.
- Curtis, R., and S. N. Frey. 2007. *Alton and Long Valley Greater Sage-Grouse Report*. Unpublished report. September 20, 2007. Cedar City: Southern Utah University, and Logan: Utah State University Extension Berryman Institute.
- CWMU. 2008. Alton CWMU. Utah Cooperative Wildlife Management Unit Association. Available at: http://www.cwmuutahwildlife.org/units/Alton.htm. Accessed January 6, 2011.
- Dale, L., J. C. Murdoch, Thayer, M. A., and P. A. Waddell. 1999. Do Property Values Rebound from Environmental Stigmas? Evidence from Dallas. *Land Economics* 75(2):311–326.
- Davis, D. R. 2013. Personal communication, email between D. R. Davis, Dark Sky Partners, and N. Ulacky, SWCA, on July 09, 2013, regarding definition of fully shielded light fixtures.
- de Molenaar, J. G., M. E. Sanders, and D. A. Jonkers. 2006. Road Lighting and Grassland Birds: Local Influence in Road Lighting on a Black-tailed Godwit Population. In *Ecological Consequences of Artificial Night Lighting*, edited by C. Rich and T. Longcore. Washington, D.C.: Island Press.
- de Vor, F., and H. L. F. de Groot. 2009. The Impact of Industrial Sites on Residential Property Values: A Hedonic Pricing Analysis for the Netherlands. May 4, 2009. Tinbergen Institute Discussion Paper 09-035/3. Available at SSRN: http://ssrn.com/abstract=1398803 or http://dx.doi.org/10.2139/ssrn.1398803. Accessed July 2, 2013.
- Department of Health and Human Services. 2011. Current Intelligence Bulletin 64. Coal Mine Dust Exposures and Associated Health Outcomes. Available at: http://www.cdc.gov/niosh/docs/2011-172/pdfs/2011-172.pdf. Accessed June 4, 2013.
- DiTomaso, J. M. 2000. Invasive Weeds in Rangelands: Species, Impacts, and Management. *Weed Science* 48(2):255–265.
- DOE/EIA. 2010. *Annual Energy Outlook 2010 with Projections to 2035*. Washington, D.C.: U.S. Department of Energy and Energy Information Administration.
- ———. 2013a. *Annual Energy Outlook 2013 with Projections to 2040*. DOE/EIA-0383. Washington, D.C.: U.S. Department of Energy and Energy Information Administration.
- ———. 2013b. What is the role of coal in the United States? Available at: http://www.eia.gov/energy_in_brief/article/role_coal_us.cfm. Accessed June 26, 2013.
- ———. 2013c. *International Energy Outlook 2013 with Projections to 2040*. DOE/EIA-0484(2013). Washington, D.C.: U.S. Department of Energy and Energy Information Administration.
- Doelling, H. H., F. D. Davis, and C. J. Brant. 1989. *The Geology of Kane County, Utah.* Salt Lake City: Utah Department of Natural Resources and Utah Geological and Mineral Survey.

- Doelling, H. H., and R. L. Graham. 1972. Southwestern Utah Coal Fields: Alton, Kaiparowits Plateau, and Kolob-Harmony: Utah Geological and Mineralogical Survey Monograph 1. Salt Lake City: Utah Geological Survey.
- DOGM. 2008. *Coal Mine Permitting: Permit Application Requirements*. Rule Nos. R645-301-525.540, 541, and 542, issued by the State of Utah.
- ———. 2009. Alton/Sink Valley Cumulative Hydrologic Impact Assessment (CHIA) for Proposed Coal Hollow Mine C/25/0005 in Kane County, Utah. Salt Lake City: Utah Department of Natural Resources, Division of Oil, Gas, and Mining.
- ———. 2013a. Alton Coal Development Permit Files. Available at: http://linux1.ogm.utah.gov/WebStuff/wwwroot/coal/files.html. Accessed January 21, 2014.
- ——. 2013b. Utah Coal Mining Water Quality Database. Available at: http://linux1.ogm.utah.gov/WebStuff/wwwroot/wqdb.html. Accessed January 22, 2014.
- ——. 2014. Utah Coal Mining Water Quality Database. Available at: http://linux1.ogm.utah.gov/WebStuff/wwwroot/wqdb.html. Accessed January 23, 2014.
- Doherty, K. E., T. Boulinier, and J. D. Nichols. 2003. Local extinction and turnover rates at the edge and interior of species' ranges. *Annales Zoologici Fenniciis* 40.
- DOI. 1979. Development of Coal Resources in Southern Utah. Part 2 Site Specific Analysis. Kane, Utah: U.S. Department of the Interior.
- ——. 1980a. Petition to Designate Certain Federal Lands in Southern Utah Unsuitable for Surface Coal Mining. Washington, D.C.: U.S. Department of the Interior.
- ——. 1980b. Southern Utah Petition Evaluation. Final 522 SMCRA Evaluation and Environmental Statement. Washington, D.C.: U.S. Department of the Interior
- DSP. 2014. Personal communication email between D. R. Davis and C. Luginbuhl, DSP, and N. Ulacky, SWCA, on January 27, 2014, regarding revised figures and dust decrease.
- Duel, M., and A. G. Kim. 1988. *Methane Control Research: Summary of Results 1964-80*. Bulletin 687. Washington, D.C.: U.S. Department of the Interior, Bureau of Mines.
- Duncombe, W., M. Robbins, and D. A. Wolf. 1999. Retire to Where? A Discrete Choice Model of Residential Location. September 1999. Available at: https://www.maxwell.syr.edu/uploadedFiles/cpr/people/faculty/duncombe/retire.pdf. Accessed July 16, 2013.
- DuRoss, C. 2008. Personal communication between C. DuRoss, Utah Geological Survey, and J. Ernstsen, SWCA.

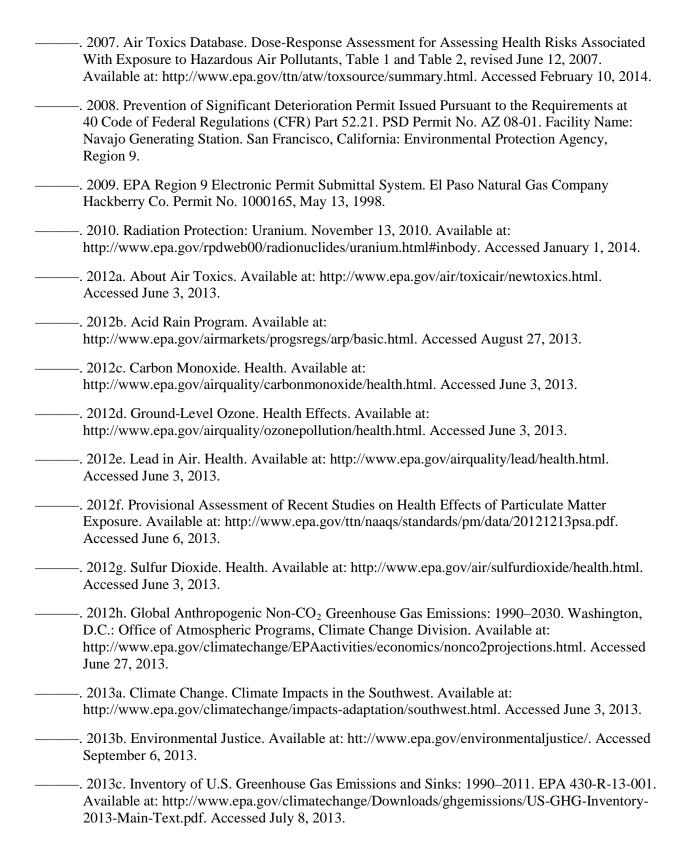
2013.

Eaton, J.G. 1991. Biostratigraphic framework for Upper Cretaceous rocks of the Kaiparowits Plateau, southern Utah. In Stratigraphy, depositional environments, and sedimentary tectonics of the western margin, Cretaceous Western Interior Seaway: Geological Society of America Special Paper 260, edited by J. D. Nations and J. G. Eaton. —. 1993. Therian mammals from the Cenomanian (Upper Cretaceous) Dakota Formation, southwestern Utah. Journal of Vertebrate Paleontology 13(1):105-124. ——. 1995. Cenomanian and Turonian (early Late Cretaceous) multituberculate mammals from southwestern Utah. Journal of Vertebrate Paleontology 15(4):761-784. Eaton, J.G., R. L. Cifelli, J. H. Hutchison, J. I. Kirkland, and J. M. Parrish. 1999. Cretaceous vertebrate faunas from the Kaiparowits Plateau, south central Utah. In Vertebrate Paleontology in Utah, edited by Ed. D. D. Gillette: Utah Geological Survey Miscellaneous Publication 99-1. Edwards, T. C., C. Homer, S. Bassett, A. Falconer, R. Ramsey, and D. Wight. 1995. *Utah Gap Analysis*: An Environmental Information System. Logan: Utah State University, Utah Cooperative Fish and Wildlife Research Unit. Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. The Birder's Handbook: A Field Guide to the Natural History of North American Birds. New York: Simon and Schuster. EIA. 2013. International Energy Statistics. Available at: http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=1&pid=7&aid=1. Accessed June 27, 2013. Ensham Resources. 2006. Ensham Central Project Environmental Noise Assessment. Appendix G of the Ensham Central Project EIS. Available at: http://www.ensham.com.au/updated/eis/pdf/Volume-2 Appendices/APPENDIX% 20G% 20-% 20NOISE.pdf. Accessed May 15, 2013. EPA. 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Washington, D.C.: U.S. Environmental Protection Agency. -. 1992. Workbook for Plume Visual Impact Screening and Analysis (Revised). Office of Air Quality Planning and Standards, Office of Air and Radiation. EPA-454/R-92-023. Research Triangle Park, North Carolina: Office of Air Quality. -. 1995. Compilation of Air Pollutant Emission Factors. Available at: http://www.epa.gov/ttn/chief/ap42/toc_kwrd.pdf. Accessed July 12, 2013. -. 1998. Bituminous and Subbituminous Coal Combustion, Table 1.1-20 Default CO2 Emission Factors for U.S. Coals. Volume I, Chapter 1.1 of Compilation of Air Pollutant Emissions Factors (AP-42). Washington, D.C.: Environmental Protection Agency. —. 2004. 40 Federal Register 69(1245):39,219, Table 7, June 24, 2004. —. 2005a. Air Quality System Quick Look Report. Monitor Summary Report, Geographic Area: Utah; Pollutant: Lead; Location: Magna, Salt Lake County, Utah. Available at:

http://www.airmonitoring.utah.gov/dataarchive/qllead2005.pdf. Accessed January 6, 2014.

-. 2005b. Review of the national ambient air quality standards for particulate matter: Policy assessment of scientific and technical information. OAQPS staff paper. Available at:

http://www.epa.gov/ttn/naaqs/standards/pm/data/pmstaffpaper 20050630.pdf. Accessed June 4,



Cedar City, Utah.

- -. 2013d. Nitrogen Dioxide. Health. Available at: http://www.epa.gov/air/nitrogenoxides/health.html. Accessed June 3, 2013. -. 2013e. Overview of Greenhouse Gases. Available at: http://www.epa.gov/climatechange/ghgemissions/gases.html. Accessed July 8, 2013. -. 2013f. Particulate Matter (PM) Research. Available at: http://www.epa.gov/research/airscience/air-particulatematter.htm>#4. Accessed June 3, 2013. -. 2013g. National Pollutant Discharge Elimination System (NPDES). National Menu of Stormwater Best Management Practices. Available at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm. Accessed February 10, 2014. EPA and UNLV. 2004. Potential Environmental Impacts of Dust Suppressants: Avoiding Another Times Beach. Available at: http://faculty.unlv.edu/piechota/LinkFiles/epa-unlv-dust-suppressant-report-2004.pdf and http://www.epa.gov/esd/cmb/pdf/dust.pdf. Accessed September 17, 2013. Ernst & Young LLP. 2013. U.S. Coal Exports: National and State Economic Contributions. May 2013. Prepared for the National Mining Association. Available at: http://www.nma.org/pdf/coal_export_report.pdf. Accessed September 12, 2013. Evans, Rick. 2008. Personal communication. SWCA Environmental Consultants, June 30, 2008. FCAOG. 1981. Alton Master Plan. St. George, Utah: Five County Association of Governments. -. 1998. Garfield County, Utah General Plan. Panguitch, Utah: Five County Association of Governments, Division of Community and Economic Development. -. 2007a. Garfield County, Utah General Plan. Panguitch, Utah: Five County Association of Governments, Division of Community and Economic Development. -. 2007b. Southwest Utah Regional Wildfire Protection Plan. St. George, Utah: Five County
- 2011. Kane County, Utah General Plan. St. George, Utah: Division of Community and Economic Development.

Association of Governments in cooperation with the Color Country Interagency Fire Center,

- Federal Interagency Stream Restoration Workgroup. 2001. Stream Corridor Restoration: Principles, Processes, and Practices. Published October 1998 and revised August 2001. Available at: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044574.pdf. Accessed November 1, 2013.
- Fehr & Peers Transportation Consultants. 2013. *Coal Hollow Development Alton Coal EIS Traffic Technical Report*. UT06-721. Salt Lake City, Utah: Fehr & Peers Transportation Consultants.
- Fischer, R. A., A. D. Apa, W. L. Wakkinen, K. P. Reese, and J. W. Connelly. 1993. Nesting-area fidelity of sage grouse in southeastern Idaho. *The Condor* 95:1038-1041.
- Forman, R. T. T., and L. E. Alexander. 1998. Roads and Their Major Ecological Effects. *Annual Review of Ecology and Systematics* 29:207-231.

- Foster, D. A., L. Grignon, E. Hammer, and B. Warren. 1996. *Inventory of Bats in High Plateau Forests of Central and Southern Utah*. National Park Service, Bryce Canyon National Park, Utah.
- Foster, J. R., A. L. Titus, G. Winterfeld, M. C. Hayden, and A. H. Hamblin. 2001. *Paleontological Survey of the Grand Staircase-Escalante National Monument, Garfield and Kane Counties, Utah.* Edited by Utah Geological Survey, Salt Lake City.
- Fox, J. 2010. Personal communication between J. Fox, USFWS, and J. H. Hornbeck, SWCA, September 13, 2010.
- Frey, N. S. 2008. Effect of habitat restoration on sage-grouse land use and habitat use of greater sage-grouse in southern Utah. Unpublished data emailed to H. Hornbeck, SWCA, Salt Lake City, Utah.
- Frey, N. S. 2009. Personal communication between Dr. N. S. Frey, Utah State University Extension, Logan, and J. H. Hornbeck, SWCA, regarding *Strategic Management Plan for Sage-grouse* 2002. State of Utah Department of Natural Resources Publication 02-20, February 12, 2009.
- Frey, N. S. 2010. 2010 End of Year Report. A21151. Logan, Utah: Utah State University, Department of Wildland Resources.
- Frey, N. S. 2013. Personal communication between N. S. Frey and A. Christensen, SWCA, on September 10, 2013, regarding end of the year report for Huet's Ranch 2010 project season.
- Frey, N. S., R. Curtis, and K. Heaton. 2013a. Response of a small population of greater sage-grouse to tree removal: implications of limiting factors. *Human–Wildlife Interactions* 7(2):260–272.
- ———. 2013b. Home Range and Movements of Greater sage-grouse in its Southern-most Distribution. In *Resolving Human-Wildlife Conflicts: Southwestern Wildlife Series*. Logan, Utah: Utah State University.
- Frey, N. S., S. G. Lupis, K. Heaton, T. A. Black, T. A. Messmer, and D. L. Mitchell. 2008. Color Country Greater Sage-grouse (*Centrocercus urophasianus*) Local Conservation Plan. Unpublished report. Utah's Community Based Conservation Program. Logan, Utah.
- Frontier Corporation USA. 2012. Wetland and Stream Delineation Technical Report Alton Coal Tract Lease by Application Project. Prepared for Alton Coal Development LLC. Prepared by Dennis Wenger Sr. (wetlands ecologist), Jeff Boice (wetlands scientist), and Collin Covington (wetlands scientist) in July 2012 at Frontier Corporation USA.
- Garcia-Pichel, F., and J. Belnap. 1996. The Microenvironments and microscale productivity of cyanobacterial desert crusts. *Journal of Phycology* 32:774-782.
- Gates, T.A. 2004. Hadrosaurian dinosaur diversity from the Upper Campanian Kaiparowits Formation, southern Utah. *Journal of Vertebrate Paleontology* 24(3):63A.
- Gauthreaux, S. J., and C. G. Belser. 2006. Effects of Artificial Night Lighting on Migrating Birds. In *Ecological Consequences of Artificial Night Lighting*, edited by C. Rich and T. Longcore. Washington, D.C.: Island Press.

- Gelbard, J. L., and J. Belnap. 2003. Roads as Conduits for Exotic Plant Invasions in a Semiarid Landscape. *Conservation Biology* 17(2):420–432.
- Gillette, D.D., L.B. Albright, A.L. Titus, and M. Graffam. 2001. Discovery and paleogeographic implications of a therizinosaurid dinosaur from the Turonian (Late Cretaceous) of southern Utah, USA. *Journal of Vertebrate Paleontology* 21(3).
- Gillette, D.D., M.C. Hayden, and A.L. Titus. 1999. Occurrence and biostratigraphic framework of a plesiosaur from the Upper Cretaceous Tropic Shale of southwestern Utah. In *Vertebrate Paleontology in Utah*: Utah Geological Survey Miscellaneous Publication 99-1.
- Green, J. S., and J. T. Flinders. 1980. Brachylagus idahoensis. Mammalian Species 125:1-4.
- Gubler, C. 2008. Personal communication between C. Gubler, BLM, and J. H. Hornbeck, SWCA, on August 21, 2008.
- Haas III, W. H., and W. J. Sarow. 2009. Retirement Migration Decision Making: Life Course Mobility, Sequencing Of Events, Social Ties and Alternatives. December 10, 2009. *Community Development Society* 28(1):1997.
- Hadley, Mike. 2008. Personal communication between M. Hadley, UDWR, and G. Weekley, SWCA, in June 2008.
- Hann, W. J., and D. L. Bunnell. 2001. Fire and land management planning and implementation across multiple scales. *International Journal of Wildland Fire* 10:389-403.
- Harju, S. M., M. R. Dzialak, R. C. Taylor, L. D. Hayden-Wing, and J. B. Winstead. 2010. Thresholds and time lags in effects of energy development on greater sage-grouse populations. *The Journal of Wildlife Management* 74(3):437-448.
- Heady, L. T. and J. W. Laundré. 2005. Habitat use patterns within the home range of pygmy rabbits (*Brachylagus idahoensis*) in southeast Idaho. *Western North American Naturalist* 60:490-500.
- Heaton, W. 2009. Personal communication between W. Heaton, CWMU, and L. Vernon, SWCA, on January 6, 2009.
- Hem, J. D. 1985. *Study and Interpretation of the Chemical Characteristics of Natural Water*. USGS Water-Supply Paper 2254. Washington, D.C.: U.S. Government Printing Office.
- Hill, R. L., C. M. White, and J. T. Flinders. 2001. *Three-toed Woodpecker Habitat Selection in a Managed Engelmann Spruce Forest on Monroe Mountain, Utah.* Salt Lake City: Utah Department of Natural Resources.
- Hirano, T., M. Kiyota, and I. Aiga. 1995. Physical effects of dust on leaf physiology of cucumber and kidney bean plants. *Environmental Pollution* 89:255-261.
- Hogue, M. 2012. *The Utah Coal Industry: Economic and Fiscal Impacts*. Salt Lake City: University of Utah, Bureau of Economic and Business Research, David Eccles School of Business.
- Holloran, M. J. 2005. Greater Sage-Grouse (*Centrocercus urophasianus*) population response to natural gas development in western Wyoming. Ph.D. dissertation, University of Wyoming, Laramie.

- Hospital-Data.com. 2009. Hospital and Nursing Home Profiles 2009 [cited January 15, 2009]. Available at: http://www.hospital-data.com/.
- HUD. 1985. Noise Guidebook: A Reference Document for Implementing the Department of Housing and Urban Development's Noise Policy. Prepared by the Environmental Planning Division, Office of Environment and Energy.
- IDA. 2010. Visibility, Environmental, and Astronomical Issues Associated with Blue-Rich White Outdoor Lighting. Tucson, Arizona: International Dark-Sky Association.
- IPCC. 2007. Climate Change 2007, The Physical Science Basis. Contribution of Working Group I to the 4th Assessment Report of the IPCC. Available at: http://www.ipcc.ch/publicationsanddata/ar4/wg1/en/contents.html. Accessed January 11, 2011.
- Jahanbani, F. 1998. The status of Utah coal in global resources. *Journal of the Minerals, Metals and Materials Society* 50:25.
- Jones & Stokes. 2004. *Transportation- and Construction-Induced Vibration Guidance Manual*. Prepared for California Department of Transportation Noise, Vibration, and Hazardous Waste Management Office. Sacramento, California: Jones & Stokes. Available at: http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf. Accessed July 18, 2013.
- Kane County. 1995. Procedures for a Zone Change Request and Zone Change Request Form. Rev: 2-95. edited by K. C. P. Commission.
- ———. 1998. Kane County Land Use Ordinance. Available at: http://kane.utah.gov/att/38/store/m8_State-Codified-Land-Use-Ordinance-02.10.2010.pdf. Accessed June 24, 2013.
- ——. 2011. Kane County General Plan. Available at: http://kane.utah.gov/att/38/store/m8_Kane-Co-Gen-Plan-Nov-11.pdf. Accessed June 17, 2013.
- ———. 2011:24. Kane County General Plan for the Physical Development of the Unincorporated Area Pursuant to Section 17-27a-403 of the Utah Code. Prepared by the Division of Community and Economic Development of the Five County Association of Governments under the guidance and direction of the Kane County Resource Development Committee. Available at: http://kane.utah.gov/att/38/store/m8_Kane-Co-Gen-Plan-Nov-11.pdf. Accessed December 17, 2013.
- ———. 2012. Kane County's Comments on the Draft Alton Coal Tract Lease by Application EIS. January 27, 2012. Kanab, Utah: Kane County Commission.
- ———. 2012. Procedures for a Zone Change Request and Zone Change Request Form. Rev 10-12. Kane County Planning Commission. Available at: http://kane.utah.gov/att/38/store/m8_Procedures-for-a-Zone-Change-10-2012.pdf. Accessed June 20, 2013.
- Keeling, C. D., R. B. Bacastow, A. E. Bainbridge, C. A. Ekdahl, P. R. Guenther, and L. S. Waterman. 1976. Atmospheric Carbon Dioxide Variations at Mauna Loa Observatory, Hawaii. *Tellus* 28(6):538–551.

- Keith, John, and Christopher Fawson. 1995. Economic Development in Rural Utah: Is Wilderness Recreation the Answer? *Annals of Regional Science* 29(3).
- Lentsch, L. D., C. A. Toline, J. Kersher, J. M. Hudson, and J. Mizzi. 2000. Range-wide Conservation Agreement and Stategy for Bonneville Cutthroat Trout (*Oncorynchus clarki utah*). Publication No. 00-19. Salt Lake City: Utah Division of Wildlife Resources.
- Leydecker, A., J. O. Sickman, and J. M. Melack. 1999. Episodic lake acidification in the Sierra Nevada, California. *Water Resources Research* 35 (9):2793-2804.
- List, R., and D. W. MacDonald. 2003. Home range and habitat useof the kit fox (*Vulpes macrotis*) in a prairie dog (*Cynomys ludovicianus*) complex. *Journal of Zoology* 259(1):1-5.
- Longcore, T., and C. Rich. 2004. Ecological Light Pollution. *Frontiers in Ecology and the Environment* 2(4):191-198.
- ———, eds. 2005. Ecological Consequences of Artificial Night Lighting. Washington D.C.: Island Press.
- Loomis, J. 2000. Economic Values of Wilderness Recreation and Passive Use: What We Think We Know at the Beginning of the 21st Century. Available at: http://www.fs.fed.us/rm/pubs/rmrs_p015_2/rmrs_p015_2_005_013.pdf. Accessed October 30, 2013.
- ———. 2005. Updated Outdoor Recreation Use Values on National Forests and Other Public Lands. Gen. Tech. Rep. PNW-GTR-658. Available at: ftp://ftp-fc.sc.egov.usda.gov/Economics/recreate/pnw_gtr658.pdf. Accessed October 30, 2013.
- Lowe, P. N., W. K. Lauenroth, and I. C. Burke. 2003. Effects of nitrogen availability on competition between Bromus tectorum and Bouteloua gracilis. *Plant Ecology* 167:247–254.
- Lowry, J. H., R. D. Ramsey, K. A. Thomas, D. L. Schrupp, W. G. Kepner, T. Sajwaj, J. Kirby, E. Waller, S. Schrader, S. Falzarano, L. Langs Stoner, G. Manis, C. Wallace, K. Schulz, P. Comer, K. Pohs, W. Rieth, C. Velasquez, B. Wolk, Boykin K.G., L. O'Brien, J. Prior-Magee, D. Bradford, and B. Thompson. 2007. Land cover classification and mapping. Chapter 2 in *Southwest Regional Gap Analysis Final Report*, edity by J. S. Prior-Magee et al. Moscow, Idaho: U.S. Geological Survey, Gap Analysis Program. Available at: http://swregap.nmsu.edu/report/SWReGAP%20Final%20Report.pdf. Accessed January 27, 2014.
- Luginbuhl, C. B., P. A. Boley, and D. R. Davis. 2013. The Impact of Light Source Spectral Power Distribution on Sky Glow. Submitted to *Journal of Quantitative Spectroscopy and Radiative Transfer*. On file at SWCA, Salt Lake City. Utah.
- Luginbuhl, C. B., P. A. Boley, D. R. Davis, and D. M. Duriscoe. 2013. The Effects of Lamp Spectral Distribution on Sky Glow over Observatories. In press.
- Lund, W.R. 2005. Fatal Earth-Fall Landslide along Kanab Creek, Kane County, Utah. Salt Lake City: Department of Natural Resources, Utah Geological Survey.
- Lutz, D. W., M. Cox, B. F. Wakeling, D. McWhirter, L. H. Carpenter, S. Rosenstock, D. Stroud, L. C. Bender, and A. F. Reeve. 2003. Impacts and Changes to Mule Deer Habitat. In *Mule Deer Conservation: Issues and Management Strategies*, edited by J. C. deVos Jr., M. R. Conover, and N. E. Hedrick.

- Lynch, E., D. Joyce, and K. Fristrup. 2011. An Assessment of Noise Audibility and Sound Levels in U.S. National Parks. *Landscape Ecology* 26:1297–1309.
- Manier, D. J., D. J. A. Wood, R. M. Donovan, M. J. Holloran, L. M. Juliusson, K. S. Mayne, S. J. Oyler-McCance, F. R. Quamen, D. J. Saher, and A. J. Titolo. 2013. Summary of science, activities, programs, and policies that influence the rangewide conservation of Greater Sage-Grouse (*Centrocercus urophasianus*): U.S. Geological Survey Open-File Report 2013–1098, p. 170. Available at: http://pubs.usgs.gov/of/2013/1098/.
- Marcus, J. J. 1997. Mining Environmental Handbook. London: Imperial College Press.
- Marvier, M., P. Kareiva, and M.G. Neubert. 2004. Habitat destruction, fragmentation, and disturbance promote invasion by habitat generalists in a multispecies metapopulation. *Risk Analysis* 24(4):869-878.
- McComb, J. S. 2004. Measuring the Benefits of Remediating a Hazardous Waste Sites in Sydney, Nova Scotia. In *Environmental Applied Science and Management*. Toronto, Canada: Ryerson University.
- McCourt, C. 2008. Personal communication between C. McCourt, Alton Coal Development, LLC, and L. Vernon, SWCA, in 2008.
- McKenzie, J. 2008. Personal communication between J. McKenzie, BLM Utah State Office, and L. Vernon, SWCA, on September 22, 2008.
- ———. 2010. Personal communication between J. McKenzie, BLM Utah State Office, and A. Childs, SWCA, regarding Alton risk of underground fires, in 2010.
- ———. 2013. Personal communication email between J. McKenzie, BLM Utah State Office, and N. Ulacky, SWCA, on November 12, 2013, regarding updated range of coal bonus bids.
- ———. 2014. Personal communication email containing *Alton LBA EIS Coal Spontaneous Combustion* report, from J. McKenzie to SWCA on January 8, 2014.
- Mid-America Regional Council. 2014. What is Sediment Pollution? Winter Watershed Tip. Mid-America Regional Council. Kansas City, Missouri. Available at: http://cfpub.epa.gov/npstbx/files/ksmo_sediment.pdf. Accessed February 28, 2014.
- Miller, M. W. 2006. Apparent Effects of Light Pollution on Singing Behavior of American Robins. *The Condor* 108(1):130-139.
- Monrad Engineering, Inc. 2012. *Rosemont Copper Project Light Pollution Mitigation Recommendation Report*. June 18, 2012. Available at: http://www.rosemonteis.us/documents/light-pollution-mitigation-recommendation-report-2012. Accessed February 1, 2013.
- Moore, C. 2008. Personal communication between C. Moore, NPS Night Sky Program manager, and B. Gaddis, SWCA, on September 26, 2008
- Morishita, Don W. 1999. Canada thistle. In *Biology and Management of Noxious Rangeland Weeds*, edited by R. Sheley, M. Borman and J. Petroff. Corvallis: Oregon State University Press.

- Naugle, D. E., C. L. Aldridge, B. L. Walker, T. E. Cornish, B. J. Moynahan, M. J. Holloran, and K. Brown. 2004. West Nile Virus: Pending Crisis for Greater Sage-Grouse. *Ecology Letters* 7(8):704-713.
- Navarra, K. J., and R. J. Nelson. 2007. The dark side of light at night: physiological, epidemiological, and ecological consequences. *Journal of Pineal Research* 43(3):215-224.
- NOAA. 2004. National Environmental Satellite Data and Information Service, National Climate Data Center Climatography of the United States No. 20 Monthly Station Climate Summaries, 1971-2000. Washington, D.C.: National Oceanic and Atmospheric Administration.
- ———. 2013. Recent Global CO2. Available at: http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html. Accessed July 2, 2013.
- NPS. 1983. Bryce Canyon Statement for Management. Available at: http://archive.org/details/statementformana83usdep. Accessed June 30, 2013.
- ——. 1987. *General Management Plan Bryce Canyon National Park, Utah.* Available at: http://archive.org/details/generalmanagemen87bryce. Accessed June 20, 2013.
- ———. 2006. National Register of Historic Places Registration Form for Panguitch Historic District. Salt Lake City: Utah Division of State History.
- ———. 2008a. Annual Data Summary 2007 Gaseous Pollutant Monitoring Program Ozone, Sulfur Dioxide, Particulate Matter, Meteorological Observations. Natural Resource Report NPS/NRPC/ARD/NRR-2008/065. Washington, D.C.: U.S. Department of the Interior, National Park Service.
- ———. 2008b. Bryce Canyon National Park. Available at: http://www.nps.gov/brca/index.htm. Accessed May 20, 2008.
- ———. 2008c. IMPROVE Monitoring network results, Bryce Canyon, 2005-2008, most recent 3-year design values used for PM2.5 background concentrations. Calculation made in accordance with Appendix N to CFR Part 50. Washington, D.C.: U.S. Department of the Interior, National Park Service.
- ——. 2008d. Natural Lightscapes. Available at: http://www.nature.nps.gov/air/lightscapes/. Accessed May 12, 2008.
- ———. 2009a. Air Quality in National Parks: 2008 Annual Performance & Progress Report. Available at: http://www.nps.gov/yose/naturescience/upload/AQ.Trends.Parks.2008.pdf. Accessed June 27, 2013.
- ———. 2009b. *Alton Coal Mine Lightscape Analysis*. Washington, D.C.: U.S. Department of the Interior, National Park Service.
- ———. 2012a. *Air Quality Resources at Bryce Canyon National Park*. Air Quality Briefing Paper. March 2012. Washington, D.C.: U.S. Department of the Interior, National Park Service, Natural Resource Stewardship & Science, Air Resources Division.

- 2012b. A Call to Action: Preparing for a Second Century of Stewardship and Engagement. Available at: http://www.nps.gov/calltoaction/PDF/Directors_Call_to_Action_Report_2012.pdf. Accessed July 17, 2013.
 2013a. Annual Park Visitation (All Years) for Bruce Canyon National Park. Available at: https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Visita tion%20(All%20Years)?Park=BRCA. Accessed July 10, 2013.
 2013b. Bryce Canyon Astronomy & Night Sky Programs. Available at: http://www.nps.gov/brca/planyourvisit/astronomyprograms.htm. Accessed June 13, 2013.
 2013c. Night Sky. Available at: http://www.nature.nps.gov/night/. Accessed June 13, 2013.
 2013d. Personal email communication between J. Notar, National Park Service, Air Resources
- NPS/NOAA. 2013. Weather data from S. Haas, NPS, to B. Gaddis, SWCA in the form of charts, graphs, and Excel documents. On file at SWCA, Salt Lake City, Utah.

Division, and L. Herr, UDAQ. On file at SWCA, Salt Lake City, Utah.

- NRCS. 2013. PLANTS Database. Greensboro, North Carolina: National Plant Data Team. Available at: http://plants.usda.gov. Accessed September 8, 2013.
- Nydam, R. L. 1999. Polyglyphanodontinae (Squamata; Teiidae) from the Medial and Late Cretaceous; new taxa from Utah, U.S.A. and Baja California del Norte, Mexico. In *Vertebrate Paleontology in Utah*, edited by D. D. Gillette: Utah Geological Survey Miscellaneous Publication 99-1, 303-317.
- ONRR. 2013. Reported Revenues and Royalties for all Land Categories in Utah. Available at: http://statistics.onrr.gov/ReportTool.aspx. Accessed June 24, 2013.
- OSM. 1983. Alluvial Valley Floor Identification and Study Guidelines. Final Report. U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement.
- Pampush, G. L. 1980. Status Report on the Long-billed Curlew in the Colombia and Northern Great Basins. U.S. Department of the Interior, Fish & Wildlife Service, Portland, Oregon, office.
- Parrish, J. R., F. P. Howe, and R. E. Norvell. 2002. Utah Partners in Flight Avian Conservation Strategy Version 2.0. UDWR Publication No. 02-27. Salt Lake City: Utah Division of Wildlife Resources.
- Patriarca, E., and P. Debernardi. 2010. *Bats and Light Pollution*. Report prepared by Centro Regionale Chirotteri, on file at SWCA, Salt Lake City, Utah.
- Pechmann, J. 2008. Personal communication between J. Pechmann, University of Utah Seismograph Station, and G. Larson, SWCA, on October 3, 2008.
- Pennsylvania Department of Environmental Protection. What is Mine Subsidence? Available at: http://www.dep.state.pa.us/MSIHomeowners/WhatIsMS.html#2/. Accessed October 16, 2009. Pennsylvania Department of Environmental Protection, Mine Subsidence Insurance 2008.
- Perlich, P. S., M. T. Hogue, and J. C. Downan. 2010. *The Structure and Economic Impact of Utah's Coal Industry*. Salt Lake City: University of Utah Bureau of Economic and Business Research.

———. 2014a. Personal communication email between E. Petersen and J. Eyre, SWCA, containing PDFs with climate data from the WRCC ("Recent Climate in the West") and the NCDC ("Alton Utah

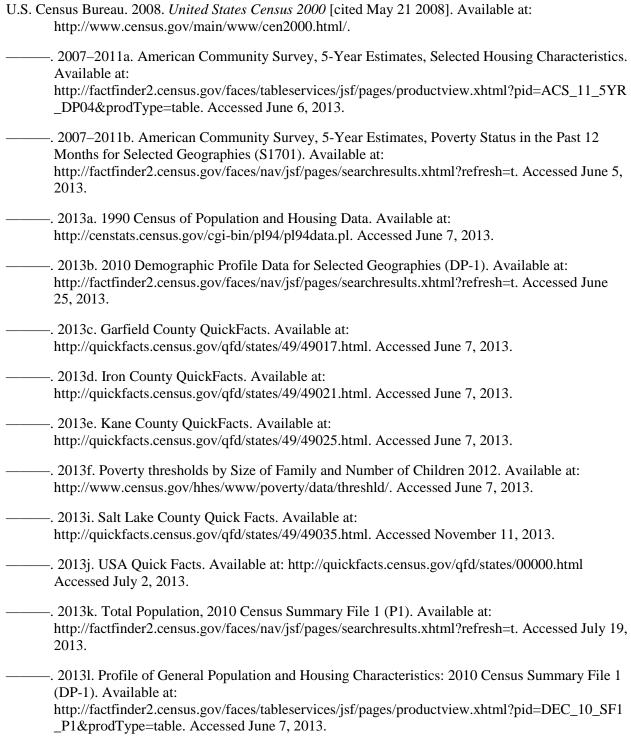
Petersen, E. 2010. Personal communication between E. Petersen and B. Gaddis, SWCA, October 2010.

- with climate data from the WRCC ("Recent Climate in the West") and the NCDC ("Alton, Utah 420086").
- ———. 2014b. Email containing PDFs from www.epa.gov and water.epa.gov regarding effects of iron in water and secondary drinking water information (PDFs dated February 28, 2014). On file at SWCA, Salt Lake City, Utah.
- Petersen Hydrologic. 2007. Investigation of Groundwater and Surface-Water Systems in the 630-Acre Proposed Coal Hollow Mine Permit and Adjacent Area; Probable Hydrologic Consequences of Coal Mining; Recommended Monitoring Plan; Potential Alluvial Valley Floor Information. Kane County, Utah. Huntington, Utah: Petersen Hydrologic. Prepared for Alton Coal Development, LLC.
- ———. 2013. Selected hydrologic data for the Alton Coal Tract and surrounding areas. Data tables on file at SWCA, Salt Lake City, Utah.
- Petersen, S. L. 2006. Alton Sage-Grouse Habitat Assessment and Mitigation Plan. Prepared for Talon, Inc.
- . 2013a. *Greater Sage-grouse Population Monitoring and Habitat Improvement*. Progress Report for Alton Coal Development, LLC. Prepared by Sage-grouse Population and Habitat Consultant S. L. Petersen for 2012.
- ———. 2013b. Personal email communication between S. Petersen, BYU, and A. Christensen, SWCA, on October 1 and October 10, 2013, regarding Alton sage-grouse.
- Pfleider, Eugene P., ed. 1968. *Surface Mining*. American Institute of Mining Metallurgical Petroleum Engineers.
- Piechota, T. C., J. van Ee, J. R. Batista, K. A. Stave, and D. A. James. 2004. Potential Environmental Impacts of Dust Suppressants: "Avoiding Another Times Beach." Available at: http://digitalscholarship.unlv.edu/sea fac articles/233/. Accessed February 2, 2014.
- Powell, J. 2008. Personal communication between J. Powell, BLM Kanab Field Office geologist, and J. Ernstsen, SWCA, in 2008.
- Queensland Parks and Wildlife Service. 2006. Assessment Report under the Environmental Protection Act 1994 about the Environmental Impact Statement for the Ensham Central Project. December 2006. Environmental Protection Agency, Queensland Government. Available at: http://www.ensham.com.au/updated/Reports/Supplementary%20Report/Supporting%20Documents/Ensham%20Central%20Project%20Assessment%20Report.pdf. Accessed November 6, 2013.
- Rechsteiner, Joe. 2008. Personal communication between J. Rechsteiner, USFS, and G. Weekley, SWCA, on May 5, 2008.
- Reese, J. 2008. Personal Communication between BLM Kanab Field Office rangeland specialist J. Reese and J. Summerhays, SWCA, in July 2008.
- Reiss, B. 2013. Personal email communication between B. Reiss, UDAQ, and G. Semerad, SWCA, on July 19, 2013.

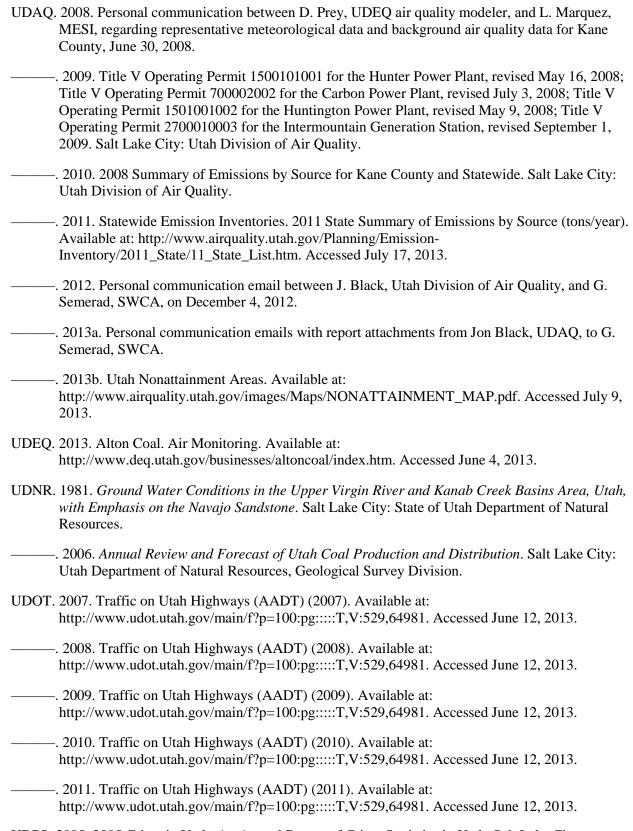
- Richards, A. B., and A. J. Moore. 1997. Blasting in an Urban Environment, in *Resourcing the 21st Century*. Paper read at the AusIMM 1997 Annual Conference, at Ballarat, Victoria, Australia.
- ———. 2009. Blast Vibration Course: Measurement, Assessment, Control. Available at: http://miningandblasting.files.wordpress.com/2009/09/blast-vibration-course_measurement_assessment_control.pdf. Accessed July 19, 2013.
- Robichaud, P. R., D. K. McCool, C. D. Pannkuk, R. E. Brown, and P. W. Mutch. 2001. Trap efficiency of silt fences used in hillslope erosion studies. In *Soil erosion research for the 21st century*, edited by J. C. Ascough II and D. C. Flanagan. St. Joseph, Michigan: American Society of Agricultural Engineers.
- Rocky Mountain Coal Mining Institute. 2009. Coal in Utah. Available at: http://www.rmcmi.org/docs/about-rmcmi-section/utah.pdf?sfvrsn=0. Accessed September 18, 2013.
- Romin, L. A., and J. A. Muck. 2002. *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances*. 2002 update (originally published 1999). Available at: http://www.wildlife-research.org/U.S.%20Fish%20and%20Wildlife%20Service%20Utah%20Field%20Office%20200 2,%20Utah%20Field%20Office%20Guidelines%20for%20Raptor%20Protection%20from%20H uman%20and%20Land%20Use%20Disturbances. Accessed February 5, 2014.
- Romney, E. M., A. Wallace, and R. B. Hunter. 1987. Pulse establishment of woody shrubs on denuded Mojave desert land. In *Proceedings Symposium on Shrub Ecophysiology and Biotechnology*, edited by E. D. McArthur, A. Wallace, and M. R. Hafterkamp. Ogden, Utah: U.S. Forest Service.
- Rydell, J. 2006. Bats and Their Insect Prey at Streetlights. In *Ecological Consequences of Artificial Night Lighting*, edited by C. Rich and T. Longcore. Washington, D.C.: Island Press.
- Schaible, D. 2013a. Personal communication email from D. Schaible, UDWR, to J. Eyre, SWCA, on July 1, 2013, in response to a request for lek counts at Alton-Sink Valley lek.
- ———. 2013b. Personal communication between D. Schaible, UDWR, and A. Christensen, SWCA, on November 11, 2013.
- Scoles-Sciulla, S. J., and L. A. DeFalco. 2009. Seed reserves diluted during surface soil reclamation in eastern Mojave Desert. *Arid Land Research and Management* 23:1-13.
- Shepard, J. P., J. Creighton, and H. Duzan. 2004. Forestry herbicides in the United States: an overview. *Wildlife Society Bulletin* 32(4):1020-1027.
- Siskind, D. E., V. J. Stachura, M. S. Stagg, and J. W. Kopp. 1980. *Structure response and damage produced by airblast from surface mining. Report of Investigations 8485*. Washington, D.C.: U.S. Bureau of Mines.
- SITLA. 2013. Trust Lands Administration: Fiscal Year 2013 Annual Report, July 1, 2012—June 30, 2013. Available at: http://trustlands.utah.gov/news/documents/SITLA_FY2013_annual_report.pdf. Accessed January 23, 2014.
- Smith, J. 2008. Personal communication between J. Smith, permit supervisor at Utah Division of Oil, Gas, and Mining, and J. Ernsten, SWCA.

- Society for Mining, Metallurgy, and Exploration. 1992. *SME Mining Engineering Handbook*. Edited by H. L. Hartman. Vol. 1, 2nd edition. Littleton, Colorado: Society for Mining, Metallurgy, and Exploration.
- Sourcewatch. Navajo Generating Station 2006 Emissions Data. Available at: http://www.sourcewatch.org/index.php?title=Navajo_Generating_Station. Accessed September 2009.
- State of Utah. 1993. Utah State Implementation Plan, Section XVII, Visibility Protection. Salt Lake City: Utah Air Quality Board.
- ———. 2008. Utah State Implementation Plan, Section XX, Regional Haze, Addressing Regional Haze Visibility Protection for the Mandatory Federal Class I Areas Required Under 40 CFR 51.309. Salt Lake City: Utah Air Quality Board.
- ———. 2013. Conservation Plan for Greater Sage-grouse in Utah. Available at: http://wildlife.utah.gov/uplandgame/sage-grouse/pdf/greater_sage_grouse_plan.pdf. Accessed May 14, 2013.
- Stavish, P. 2006. *Development's Sink Valley-Alton Amphitheater Project Area, Kane County, Utah.* U-05-MQ-0346p. Moab, Utah.
- ———. 2007. Cultural Resource Inventory of Alton Coal Development's Sink Valley-Alton Amphitheater Project Area, Kane County, Utah, edited by Montgomery Archaeological Consultants, Moab, Utah.
- ———. 2008a. *Cultural Resource Inventory of Alton Coal Development's Project Area, Kane County, Utah.* Report No. U-05-MQ-1568b. Moab, Utah: Montgomery Archaeological Consultants.
- ———. 2008b. Cultural Resource Management Plan for Alton Coal Development's Proposed Development of the Alton Amphitheater and Sink Valley, Kane County Utah, Draft 2. Submitted to State of Utah Public Lands Policy Coordination Office, Salt Lake City, Utah, and the Division of Oil, Gas, and Mining, Salt Lake City.
- . 2008c. Cultural Resource Inventory of Alton Coal Development's Additional Survey of 440 Acres in the Alton Coal Amphitheater, Kane County, Utah. Moab, Utah: Montgomery Archaeological Consultants.
- Sterling Codifiers, Inc. 2013. Brian Head, Utah Town Code 9-12-6: lighting. August 12, 2008. Available at: http://www.sterlingcodifiers.com/codebook/index.php?book_id=858. Accessed July 17, 2013.
- Stokes, W. L. 1986. *Geology of Utah*. Salt Lake City: Utah Department of Natural Resources, Geological and Mineral Survey.
- Stolt, M. H., J. C. Baker, T. W. Simpson, D. C. Martens, J. R. McKenna, and J. R. Fulcher. 2001. Physical reconstruction of mine tailings after surface mining material sands from prime agricultural land. *Soil Science* 166(1):29-37.
- Stracher, G. B., ed. 2007. Geology of Coal Fires: Case Studies from Around the World: Reviews in Engineering Geology. Vol. XVIII. DOI: 10.1130/2007.4118(06).

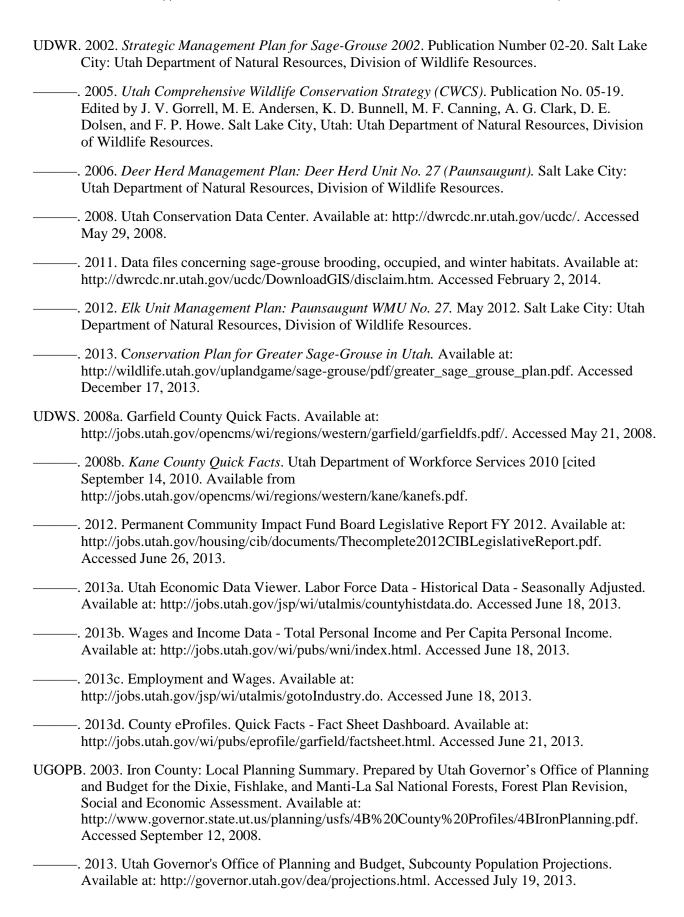
- Sullivan, T. L., and T. A. Messmer. 2003. Perceptions of deer-vehicle collision management by state wildlife agency and department of transportation administrators. *Wildlife Society Bulletin* 31:163-173.
- SWCA. 2007a. *Alton Coal Tract LBA EIS Public Scoping Report*. Salt Lake City, Utah: SWCA Environmental Consultants.
- ———. 2007b. *Alton Coal Tract LBA EIS Draft Reconnaissance Survey Report*. Salt Lake City, Utah: SWCA Environmental Consultants.
- ———. 2008. Environmental Noise Data Sheets for the Alton Coal. Prepared for Alton Coal Development LLC and submitted to BLM, Salt Lake City, Utah.
- SWReGAP. 2004. Provisional Digital Land Cover Map for the Southwestern United States. Version 1.0. U.S. Geological Survey National Gap Analysis Program. Logan, Utah: Utah State University, College of Natural Resources, RS/GIS Laboratory.
- Tatum, V. L. 2004. Toxicity, transport, and fate of forest herbicides. *Wildlife Society Bulletin* 32(4):1042-1048.
- Taylor, R. L., B. D. Maxwell, and R. J. Boik. 2006. Indirect effects of herbicides on bird food resources and beneficial arthropods. *Agriculture, Ecosytems, and Environment* 116(3-4):157-164.
- Taylor, R.L., B.L. Walker, D.W. Naugle, and S. Mills. 2012. Managing multiple vital rates to maximize greater sage-grouse population growth. *The Journal of Wildlife Management* 76(2):336-347.
- Tilton, T. L. 2001. Geologic map of the Alton quadrangle, Kane County, Utah. Salt Lake City: Utah Geological Survey.
- Titus, A. L. 2002. Late Cenomanian (Late Cretaceous Sciponoceras gracile Biozone) paleogeographic evolution of the Grand Staircase-Escalante National Monument region: implications of recent advances in high-resolution ammonoid biostratigraphy. Cedar City, Utah: Abstracts, 2002 Rocky Mountain Section of the Geological Society of America Annual Meeting.
- ———. 2004. Unpublished data from field notes and informal program reports. On file at Bureau of Land Management, Kanab Field Office, Kanab, Utah.
- ———. 2005. Unpublished data from field notes and informal program reports. On file at Bureau of Land Management, Kanab Field Office, Kanab, Utah.
- Titus, A. L., J. D. Powell, E. M. Roberts, S. D. Sampson, S. L. Pollock, J. I. Kirkland, and L. B. Albright. 2005. Late Cretaceous stratigraphy, depositional environments, and macrovertebrate paleontology of the Kaiparowits Plateau, Grand Staircase-Escalante National Monument, Utah. In *Interior Western United States, GSA Field Guide, Volume 6*, edited by J. L. Pederson and C. M. Dehler, pp. 101–128.

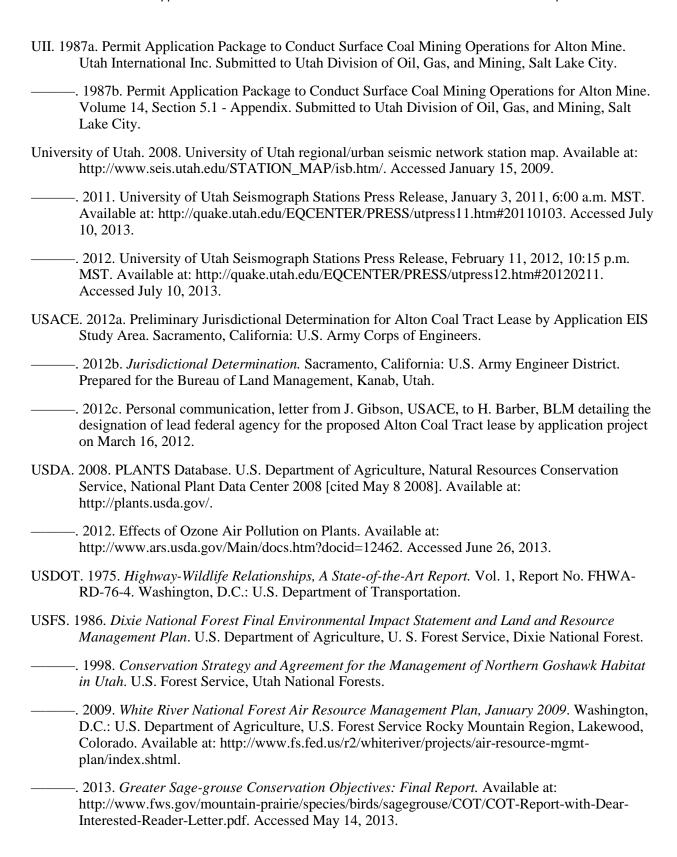


- U.S. Congress. 2006. National Heritage Areas Act of 2006, edited by Senate and House of Representatives of the United States of America, Washington, D.C.
- U.S. Department of Energy. Energy Information Administration. 2013. What is the role of coal in the United States? Available at: http://www.eia.gov/energy_in_brief/article/role_coal_us.cfm. Accessed June 26, 2013.



UDPS. 2005. 2005 Crime in Utah: An Annual Report of Crime Statistics in Utah. Salt Lake City: Department of Public Safety, Bureau of Criminal Identification.





- USFS, NPS, and USFWS. 2010. Federal Land Managers' Air Quality Related Values Work Group (FLAG): Phase I Report-Revised (2010). Natural Resource Report NPS/NRPC/NRR-2010/232. Available at: http://www.nature.nps.gov/air/Pubs/pdf/flag/FLAG_2010.pdf. Accessed June 23, 2013. -. 2011. Federal Land Managers' Interagency Guidance for Nitrogen and Sulfur Deposition Analyses. November 2011. Natural Resource Report NPS/NRSS/ARD/NRR—2011/465. Denver, Colorado: National Park Service. USFWS. 1996. Chapter 36 - Colorado Plateau Semi-Desert. In Ecological Subregions of the United States, edited by W. H. McNabb and P. E. Avers. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service. 2002. Birds of Conservation Concern 2002. Washington, D.C.: U.S. Department of the Interior. Fish and Wildlife Service, and, Arlington, Virginia: Division of Migratory Bird Management. -. 2002. Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances. 2002 update, prepared by L. A. Romin and J. A. Muck, U.S. Fish and Wildlife Service, Utah Field Office. Salt Lake City, Utah. . 2003. Monitoring Plan for the American Peregrine Falcon, A Species Recovered Under the Endangered Species Act. USFWS, Divisions of Endangered Species and Migratory Birds and State Programs, Pacific Region, Portland, Oregon. Available at: http://ecos.fws.gov/docs/species/doc1164.pdf. Accessed February 10, 2014. -. 2010. Memorandum of Understanding between the U.S. Department of the Interior Bureau of Land Management and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds. Available at: http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information Resources Management/policy/ib _attachments/2010.Par.67473.File.dat/IB2010-110_att1.pdf. Accessed February 25, 2014. -. 2012. Utah Prairie Dog (Cynomys parvidens) Revised Recovery Plan. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service, Denver, Colorado, office. -. 2013a. Greater Sage-grouse (Centrocercus urophasianus) Conservation Objectives: Final Report. Available at: http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/COT/COT-Report-with-Dear-Interested-Reader-Letter.pdf. Accessed May 14, 2013. . 2013b. California Condor (*Gymnogyps calfornianus*) 5-Year Review: Summary and Evaluation. June 2013. Washington, D.C.: U.S. Department of the Interior, Fish and Wildlife Service, Pacific Southwest Region.
- USFWS and Utah Prairie Dog Recovery Team. 2012. *Utah Prairie Dog* (Cynomys parvidens) *Final Revised Recovery Plan*. Available at: http://www.fws.gov/mountain-prairie/species/mammals/utprairiedog/2012MarchRevisedRecoveryPlan_Final.pdf. Accessed February 13, 2014.
- USGS. 2008. National seismic hazard maps. Available at: http://gldims.cr.usgs.gov/nshmp2008/viewer.htm/. Accessed October 3, 2008.
- Utah AGRC. 2013. Kane County Tax Parcel Data. Available at: ftp://ftp.agrc.utah.gov/UtahSGID_Vector/UTM12_NAD83/CADASTRE/UnpackagedData/Parcel s_Kane/. Accessed July 10, 2013.

- Utah Department of Health. 2005. Health Status by Race and Ethnicity. Office of Public Health Assessment. May 2005. Available at: http://health.utah.gov/opha/publications/raceeth05/Race-Eth Report.pdf. Accessed December 5, 2012. . 2009. Utah Health Disparities Summary for American Indians: Chronic Conditions, Reproductive Health, Injury and Lifestyle Risk. Available at: http://health.utah.gov/disparities/data/disparitiessummary/AmericanIndianFactSheet.pdf. Accessed June 25, 2013. Utah Division of Water Rights. 2014. Searching Water Right Records. Available at: http://www.waterrights.utah.gov/wrinfo/query.asp. Accessed January 14, 2014. Utah Geological Survey. 2012a. U.S. Coal Production and Number of Mines by State and Mine Type, 2011. Available at: http://geology.utah.gov/emp/energydata/statistics/coal2.0/pdf/T2.6.pdf. Accessed June 24, 2013. -. 2012b. Utah Coal Resources by Coal Field, 2012. Available at: http://geology.utah.gov/emp/energydata/statistics/coal2.0/pdf/T2.3%20&%20T2.1.pdf. Accessed June 26, 2013. -. 2012c. Coal Production in Utah by Coal Field 1982–2012. Available at: http://geology.utah.gov/emp/energydata/statistics/coal2.0/pdf/T2.11%20&%20F2.3.pdf. Accessed June 26, 2013. . 2013a. Average F.O.B. Price and Value of Utah Coal, 1960–2012. Available at: http://geology.utah.gov/emp/energydata/statistics/coal2.0/pdf/T2.22%20&%20F2.10.pdf. Accessed October 21, 2013. -. 2013b. Utah Coal Resources by County, 2012. Available at: http://geology.utah.gov/emp/energydata/statistics/coal2.0/pdf/T2.4.pdf. Accessed June 24, 2013. Utah Office of Tourism. 2007-2010. Tourism Profiles for Kane, Garfield, and Iron Counties. Salt Lake City: Utah Office of Tourism. -. 2009. 2008 county profiles. Available at: http://travel.utah.gov/research_and_planning/countyprelim.html. Accessed September 14, 2010. -. 2013a. County Data. Available at: http://travel.utah.gov/research and planning/countyprelim.html. Accessed June 18, 2013. -. 2013b. Various County Tourism Tax Revenues. 2008-2012 TRT, Restaurant, and Resort Community. Available at: http://travel.utah.gov/research_and_planning/documents/VariousTourismTaxRevenues_000.pdf. Accessed June 24, 2013.
- Utah Prairie Dog Implementation Team. 1997. *Utah Prairie Dog Interim Conservation Strategy*. National Park Service, U.S. Bureau of Land Management, USDA APHIS Wildlife Services, U.S. Forest Service, U.S. Fish and Wildlife Service, Utah Division of Wildlife Resources, and Utah State University.
- Utah Shakespeare Festival. 2013. Quick Facts. Available at: http://www.bard.org/about/quickfacts.html. Accessed June 21, 2013.

- Utah State Tax Commission. 2007. *Utah Property Tax 2006 Annual Statistical Report*. Salt Lake City, Utah: Property Tax Division, Utah State Tax Commission.
- 2012. Utah Property Tax 2011 Annual Statistical Report. Property Tax Division. Available at: http://propertytax.utah.gov/generalinformation/reporting-and-statistics/annual-statistical-report/most-recent-statistical-report. Accessed June 17, 2013.
- VandenBerg, M. D. 2010. *Annual Review and Forecast of Utah Coal Production and Distribution 2008*. Salt Lake City: Utah Department of Natural Resources, Utah Geological Survey.
- VandenBerg, M. D., T. Boden, K. Krahulec, D. Tabet, and M. Gwynn. 2012. *Utah's Extractive Resource Industries*. Salt Lake City: Utah Department of Natural Resources, Utah Geological Survey.
- Venturoni, Linda, Patrick Long, and Richard Perdue. 2005. *The Economic and Social Impacts of Second Homes in Four Mountain Resort Counties of Colorado*. Denver, Colorado: Paper presented at the 2005 annual meeting of the Association of American Geographers.
- Walker, B. L., D. E. Naugle, and K. E. Doherty. 2007. Greater Sage-Grouse Population Response to Energy Development and Habitat Loss. *Journal of Wildlife Management* 71 (8):2644–2654.
- Walters, R. E., and E. Sorensen. 1983. *Utah bird distribution: latilong study*. Publication No. 83-10. Salt Lake City: Utah Department of Natural Resources, Division of Wildlife Resources.
- Wang, W., Y. Liu, D. Li, C. Hu, and B. Rao. 2009. Feasibility of cyanobacterial inoculation for biological soil crusts formation in desert area. Soil Biology & Biochemistry 41 (2009) 926-929. Available at: http://ir.ihb.ac.cn/bitstream/152342/7710/1/Feasibility%20of%20cyanobacterial%20 inoculation%20for%20biological%20soil%20crusts%20formation%20in%20desert%20area.pdf. Accessed June 19, 2013.
- Welsh, S. L., D. Atwood, S. Goodrich, and L.C. Higgins. 2003. *A Utah Flora*. Provo, Utah: Brigham Young University Print Services.
- West, N. E., and J. A. Young. 2000. Intermountain Valleys and Lower Mountain Slopes. In *North American Terrestrial Vegetation*. Cambridge, U.K.: Cambridge University Press.
- White, P. J., and K. Ralls. 1993. Reproduction and spacing patterns of kit foxes relative to changing prey availability. *Journal of Wildlife Management* 57(4):861-867.
- Whitson, T. D., ed. 1996. *Weeds of the West*. Laramie, Wyoming: Western Society of Weed Science in cooperation with Cooperative Extension Services, University of Wyoming.
- Wilbert, M., J. Thomson, and N. W. Culver. 2008. Analysis of Habitat Fragmentation from Oil and Gas Development and its Impact on Wildlife: A Framework for Public Land Management Planning. Washington, D.C.: The Wilderness Society, Ecology and Economics Research Department.
- Williams, A. 2011. The Impact of Surface Coal Mining on Residential Property Values: A Hedonic Price Analysis. University of Tennessee–Knoxville Department of Economics. May 2011. Available at: http://trace.tennessee.edu/cgi/viewcontent.cgi?article=1096&context=pursuit. Accessed June 25, 2013.
- Willson, C. J., P. S. Manos, and R. B. Jackson. 2008. Hydraulic traits are influenced by phylogenetic history in the drought-resistant, invasive genus Juniperus (Cupressaceae). *American Journal of Botany* 95(3):299-314.

- Wiss, J. F., and H. R. Nichols. 1974. *A study of damage to a residential structure from blast vibrations*. New York: American Society of Civil Engineers.
- Woods, A. J., D. A. Lammers, S. A. Bryce, J. M. Omernik, R. L. Denton, M. Domeier, and J. A. Comstock. 2001a. Ecoregions of Utah (color poster with map, descriptive text, summary tables, and photographs). Reston, Virginia: U.S. Geological Survey.
- ——. 2001b. *Ecoregions of Utah*. Color poster with map, descriptive text, summary tables, and photographs (map scale 1:1,175,000). Reston, Virginia: U.S. Geological Survey.
- WRAP. 1996. Sources in and near Class I areas forum: near emissions. 1996 data. Available at: www.wrapair.org/forums/dejf/fdh. Accessed January 7, 2014.
- WRCC. 2006. Period of record climate summary. Station 420086, Alton, Utah. Available at: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ut0086. Accessed January 15, 2009.
- ———. 2010. Historical climate information, Western U.S. historical summaries, precipitation maps, station inventories, wind and evaporation data. Available at: www.wrcc.dri.edu/.
- ———. 2013. Alton, Utah, Period of Record Monthly Climate Summary, 5/1/1915 to 2/28/2013. Station 420086. Available at: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ut0086. Accessed October 8, 2013.
- Zweifel, M. 2007. *Alton Coal Additions* 2007. U-07-BL-0960b. Washington, D.C.: U.S. Department of the Interior, Bureau of Land Management, Kanab, Utah, Field Office.
- ———. 2008. Personal communication between M. Zweifel, BLM Kanab Field Office, and M. Cannon, SWCA, on June 4, 2008.